



Form l	PTO	-1449 Modified	Docket No. UPN-4296/P2957	Application No. 10/706,799			
C	ited b	t and Publications by Applicant heets if necessary)	Applicant Joel S. Karp, et al.				
		nent of Commerce Trademark Office	Filing Date November 12, 2003	Group 3736 28 78			
			Confirmation No. 7178				
O	ГНЕ	R DOCUMENTS (Includ	ing Author, Title, Date, l	Pertinent Pages, Etc.)			
08	5	3D PET," Physics in Med	d. & Biol., 2004, 49, 2577-				
CS	6	NaI(T1) detectors," J. Nu	icl. Med., 2001, 42, 1821-	PET scanner using curve-plate 1830			
CS	7	of-flight positron camera	Allemand, R., et al., "Potential advantages of a cesium fluoride scintillator for a tim of-flight positron camera," J. Nucl. Med., 1980, 21, 153-155				
ĆS	8	system using time-of-flig 1986, 10(2), 287-295	Bendriem, B., et al. "A technique for the correction of scattered radiation in a PET system using time-of-flight information," J. of Computer Assisted Tomography,				
CS	9	conventional PET," J. Ni	f-flight positron emission tomography: status relative to ucl. Med., 1983, 24(1), 73-78				
CS	10	positron emission tomog 460-463	raphy," IEEE Transaction	al BGO detector system for s on Nuclear Science, 1986, 33(1),			
<u>C</u> 8	11	and round photomultiplie 42(4), 1064-1068	er tubes," IEEE Transaction	r modules employing rectangular ons on Nuclear Science, 1995,			
CS	12	suitable for volume ECT 61-66	," IEEE Transactions on M	nge space reconstruction algorithm Medical Imaging, 1986, MI-5(2),			
CS	Daube-Witherspoon, M.E., et al., "Application of the row action maximum likelihood algorithm with spherical basis functions to clinical PET imaging Transactions on Nuclear Science, 2001, 48(1), 24-30						
CS	14	Freifelder, R., et al., "De	sign and performance of the sign and performance of the sign and performance of the sign and sign are sign as the sign and performance of the	he HEAD PENN-PET scanner,"			
EXAMINER	1	XXX	DATE CON	SIDERED 10/13/05			
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HARM PILLIAAY VIANIIAA I		Docket No. UPN-4296/P2957	Application No. 10/706,799				
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant Joel S. Karp, et al.				
U.S. Department of Commerce Patent and Trademark Office			Filing Date November 12, 2003	Group 3736 28 78			
•			Confirmation No. 7178				
O'	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)						
CS	15	Haynor, D.R., et al., "A scheme for accidental coincidence correction in time-of-flight positron tomography: theory and implementation," <i>IEEE Transactions on Nuclear Science</i> , 1988, 35(1), 753-756					
CS	16	Ishibashi, H., et al., "Cer sensitive detectors," IEE.	Ishibashi, H., et al., "Cerium doped GSO scintillators and its application to position sensitive detectors," <i>IEEE Trans. Nucl. Sci.</i> , 1989, 36(1), 170-172				
Q	17	Med. Biol., 30(7), 1985,	Karp, J.S., et al., "Performance of a position-sensitive scintillation detector," Phys. Med. Biol., 30(7), 1985, 643-655				
Č8	18	Karp, J.S., et al., "Singles transmission in volume imaging PET with a <sup>137</sup> Cs source, Phys. Med. Biol., 1995, 40, 929-944					
<i>C</i> 8	19	Karp, J.S., et al., "Performance of a brain PET camera based on anger-logic gadolinium oxyorthosilicate detectors," J. of Nuclear Med., 2003, 44(8), 1340-1349					
CE	20	PET scanner," J. of Nucl	Karp, J.S., et al., "Three-dimensional imaging characteristics of the HEAD PENN-PET scanner," J. of Nuclear Med., 1997, 38(4), 636-643				
	21	PENN-PET scanner," IE	EE Transactions on Nucle	nstruction methods for the HEAD ear Science, 1998, 45(3), 1144-			
(S	22	imaging capability," J. λ	lucl. Med., 1990, 31, 617-0				
CS	23	digital processing," IEEI	E, TNS, <b>1986</b> , 1-5	us scintillation detector using			
Co	24	Karp, J.S., " Is LSO the	future of PET?," Eur. J. of	Nucl. Med., 2002, 29, 1523-1525			
EXAMINER	$\prec$		DATE CON	SIDERED 10/13/05			
7		Y / )		6 2004 W/W			

Form 1	РТО	-1449 Modified	Docket No. UPN-4296/P2957	Application No. 10/706,799			
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant Joel S. Karp, et al.				
		nent of Commerce Frademark Office	Filing Date November 12, 2003	Group 3736 2-8 78			
•			Confirmation No. 7178				
O'	ГНЕ	R DOCUMENTS (Includ	ling Author, Title, Date,	Pertinent Pages, Etc.)			
CS	25	using time-of-flight info	fect of random and scatter rmation," Conference Rec Medical Imaging Confere	fractions in variance reduction ord of the 2003 <i>IEEE Nuclear</i> ence, 2003, 3 pages			
CS	26	Kuhn, A., et al., "Design of a lanthanum bromide detector for TOF PET," <i>IEEE Trans. Nucl. Sci.</i> (accepted for publication), 2004, 6 pages					
CS	27	Lewellen, T.K., et al., "Improving the performance of the SP-3000 PET detector modules," <i>IEEE Transactions on Nuclear Science</i> , 1992, 39(4), 1074-1078					
CS	28	Lewellen, T.K., et al., "An experimental evaluation of the effect of time-of-flight information in image reconstructions for the scanditronix/PETT electronics SP-3000 positron emission tomography – preliminary results," <i>IEEE Transactions on Nuclear Science</i> , 1989, 36(1), 1095-1099					
CS	29	Lewellen, T.K., "Time-c 268-275					
CS	30	Mankoff, D.A., et al., "The high count rate performance of a two-dimensionally position-sensitive detector for positron emission tomography," <i>Phys. Med. Biol.</i> , 1989, 34(4), 437-456					
CS	31	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Co	32	Melcher, C.L., et al., "Cerium-doped lutetium oxyorthosilicate: a fast, efficient new scintillator," <i>IEEE Trans. Nucl. Sci.</i> , 1992, 39, 502-505					
(8	33	Melcher, C.L., et al., "Scintillation properties of LSO:Ce boules," <i>IEEE Trans. Nucl. Sci.</i> , 2000, 47, 965-968					
CS	34	Moses, W.W., et al., "Time of flight in PET revisited," <i>IEEE Transactions on Nuclear Science</i> , 2003, 50(5), 1325-1330					
O	THE	R DOCUMENTS (Includ	ling Author, Title, Date,	Pertinent Pages, Etc.)			

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10/13/05

Form l	PTO	-1449 Modified	Docket No. UPN-4296/P2957	Application No. 10/706,799			
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant Joel S. Karp, et al.				
U.S. Department of Commerce Patent and Trademark Office			Filing Date November 12, 2003	Group 3736 2878			
			Confirmation No. 7178				
O	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)						
B	35	Transactions on Nuclear	Science, 1999, NS-46, 47				
Ć	36	Instruments and Methods	Moses, W.W., "Current trends in scintillator detectors and materials," Nuclear Instruments and Methods in Physics Research A, 2002, 487, 123-128				
(3	37	Moszyński, M., et al., "Energy resolution of scintillation detectors readout with large avalanche photodiodes and photomultipliers," <i>IEEE Trans. Nucl. Sci.</i> , 1998, 45, 472-477					
CS	38			on counters with BaF <sub>2</sub> crystals for Nucl. Instru. Meth., 1984, A226,			
CSS	39	Moszyński, M., et al., "Recent progress in fast timing with CsF scintillators in application to time-of-flight positron tomography in medicine," <i>Nucl. Instru. Meth.</i> , 1983, 205, 239-249					
CS	40		properties of GSO, LSO Methods in Physics Rese	and other Ce doped scintillators," earch, 1996, 372, 51-58			
· (S	41	Moszyński, M., "Inorgan Instruments and Methods	ic scintillation detectors in Physics Research, 20	in γ-ray spectrometry," Nuclear 03, 505, 101-110			
03	42	emission tomography," J	Nucl. Med., 1980, 21, 1	reconstruction in positron 095-1097			
Š	43	Nuclear Science, 1983, N	<i>IS-30(1)</i> , 739-743	ppet," IEEE Transactions on			
(3	44			thm and image quality estimation in Medical Imaging, 1998, 17(2),			
EXAMINER	6	02/	DATE CON	ISIDERED 10/13/08			
4	© 2004 WW						

Form 1	Form PTO-1449 Modified		Docket No. UPN-4296/P2957	Application No. 10/706,799			
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant Joel S. Karp, et al.				
U.S. Department of Commerce Patent and Trademark Office			Filing Date November 12, 2003	Group 2736 2878			
			Confirmation No. 7178				
O'	THE	R DOCUMENTS (Inclu	ling Author, Title, Date,	Pertinent Pages, Etc.)			
OS	45	scanner," IEEE Transac	tions on Nuclear Science,				
S	46	tomography (TOFPET) 715-719	Philippe, E.A., "Some signal processing aspects of time-of-flight positron emission tomography (TOFPET) system implementation," <i>IEEE Trans. Nucl. Sci.</i> , 1983, 30,				
CS	47	Philippe, E.A., et al., "Real-time image reconstruction for time-of-flight positron emission tomography (TOPPET)," <i>IEEE Transactions on Nuclear Science</i> , 1982, NS-29, 524-528					
CS	48	Politte, D.G., "Results of a comparative study of a reconstruction procedure for producing improved estimates of radioactivity distributions in time-of-flight emission tomography," <i>IEEE Transactions on Nuclear Science</i> , 1984, NS-31(1), 614-619					
Ch	49	Reader, A.J., "Fast accuvolume imaging," Phys.	Reader, A.J., "Fast accurate iterative reconstruction for low-statistics positron volume imaging," <i>Phys. Med. Biol.</i> , 1998, 43, 835-846				
CS	50	Robeson, W., et al., "Su factors affecting quantit 135-142	Robeson, W., et al., "Superpett 3000 time-of-flight pet tomography: optimization of factors affecting quantitation," <i>IEEE Transactions on Nuclear Science</i> , 1993, 40(2),				
0>	51		3:Ce scintallators for gam r Science, 2003, 50(6), 24	ma-ray spectroscopy," <i>IEEE</i> 1-2413			
C	52	Shah, K.S., et al., "LaC and Methods in Physics	3:Ce scintillator for γ-ray Research, 2003, 505, 76-	detection," Nuclear Instruments 81			
es	53	Snyder, D.L., et al., "A mathematical model for positron emission tomography system having time-of-flight measurements," <i>IEEE Tran. Nucl. Sci.</i> , 1981, 28, 3575-3585					
Snyder D.L., et al., "Some noise camparisons of data-collection arrays for emiss tomography-systems having time-of-flight measurements," <i>IEEE Transactions Nuclear Science</i> , 1982, NS-29(1), 1029-1033							
EXAMINER	1	ler/	DATE CON				
4		X		© 2004 WW			

Form PTO-1449 Modified			Docket No. UPN-4296/P2957	Application No. 10/706,799		
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U.S. Department of Commerce Patent and Trademark Office			Filing Date November 12, 2003	Group 3736 2878		
•			Confirmation No. 7178			
07	ГНЕГ	R DOCUMENTS (Includ	ling Author, Title, Date,	Pertinent Pages, Etc.)		
(8)	55	instrumentation using th Human Brain Studied w	ith Positron Emission Tom	on emission tomography on," in The Metabolism of the nography, Greitz, T., et al. (Eds.),		
CŚ	56	Raven Press, New York, 1985, 1-12 Surti, S., et al., "Optimizing the performance of a PET detector using discrete GSO crystals on a continuous light guide," <i>IEEE Trans. Nucl. Sci.</i> , 2000, 47, 1030-1036				
CS	57	Surti, S., et al., "Imaging characteristics of a 3-dimensional GSO whole-body PET camera." J. of Nuclear Medicine, 2004, 45(6), 1040-1049				
Ó	58	Surti, S., et al., "Design evaluation of A-PET: a high sensitivity animal PET camera IEEE Transactions on Nuclear Science, 2003, 50(5), 1357-1363				
C5	59	Surti, S., et al., "Slotted surface treatment of position-sensitive NaI(T1) detectors to improve detector performance," <i>IEEE Transactions on Nuclear Science</i> , 2001, 48(6) 2418-2423				
CS	60	Surti, S., et al., "Evaluation of pixilated NaI(T1) detectors for PET," IEEE  Transactions on Nuclear Science, 2003, 50(1), 24-31				
B	61	Surti, S., et al., "Image of Med. Biol. (accepted for	quality assessment of LaBr publication), 2004, 1-25	3 based 3D PET scanners," Phys.		
CS	62	Surti, S., et al., "Investig Transactions on Nuclea	gation of lanthanum scintil r Science, 2003, 50(3), 348	lators for 3-D PET," <i>IEEE</i> 8-354		
CS	63	Ter-Pogossian, M.M., et al., "Super PETT I: A positron emission tomography utilizing photon time-of-flight information," <i>IEEE Transactions on Medical Imaging</i> , 1982, MI-1(3), 179-187				
B	64	Tomitani, T., "Image re	construction and noise eva on tomography," <i>IEEE Tro</i>	luation in photon time-of-flight ans. Nucl. Sci., 1981, 28, 4582-		
EXAMINER	K	02/1	DATE CON	SIDERED (6/13/65		
	© 2004 WW					

HARM PILLIAAY VIAAITIPA			Docket No. UPN-4296/P2957	Application No. 10/706,799			
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U.S. Department of Commerce Patent and Trademark Office			Filing Date November 12, 2003	Group 3736 2878			
			Confirmation No. 7178				
O	THE	R DOCUMENTS (Includ	ling Author, Title, Date,	Pertinent Pages, Etc.)			
(5)	65	1989. 47. R85-R106		cal imaging," Phys. Med. Biol.,			
CS	66	Appl Phys Letts. 77(10	0), 1467-1468	scintillator: Ce <sup>3+</sup> activated LaCl <sub>3</sub> ,"			
Ch	67	Appl. Phys. Letts., 2001,	, <i>79(10)</i> , 1573-1575	scintillator: Ce <sup>3+</sup> activated LaBr <sub>3</sub> ,"			
CS	68	photomultipliers," Tran.	Wong, WH., et al., "An analog decoding BGO block detector using circular photomultipliers," <i>Transactions on Nuclear Science</i> , 1995, 42(4), 1095-1101				
05	69	flight PET," J. of Nuclea	ar Medicine, 1983, <i>24</i> , 52	sign optimization of the time-of- -60			
Ó	70	high intrinsic resolution	time-of-flight positron en	ium fluoride (BaF <sub>2</sub> ) scintillator for nission tomography," <i>IEEE</i> , 381-386			
C	71	Yamamoto, M., et al., "flight assisted positron of Science, 1983, NS-30(1)	Transactions on Nuclear Science, 1984, NS-31(1), 381-386  Yamamoto, M., et al., "Effect of the software coincidence timing window in time-of-flight assisted positron emission tomography," IEEE Transactions on Nuclear Science, 1983, NS-30(1), 711-714				
CS	72	Yamamoto, M., et al., "Time-of-flight positron imaging and the resolution improvement by an iterative method," <i>IEEE Transactions on Nuclear Science</i> , 1989, 36(1), 998-1002					
CS	73	Yamamoto, M., et al., "Experimental assessment of the gain achieved by the utilization of time-of-flight information in a positron emission tomography (Super PETT 1)," <i>IEEE Transactions on Medical Imaging</i> , 1982, MI-1(3), 187-192					
CS	74	Yamaya, T., et al., "High-resolution image reconstruction method for time-of-flight positron emission tomography," <i>Phys. Med. Biol.</i> , 2000, 45, 3125-3134					
EXAMINER			DATE CO	NSIDERED $6/13/05$			
7				© 2004 WW			

Form PTO-1449 Modified  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)		Docket No. UPN-4296/P2957	Application No. 10/706,799			
		Applicant Joel S. Karp, et al.				
U.S. Department of Commerce Patent and Trademark Office			Filing Date November 12, 2003	Group 3736 2878		
•			Confirmation No. 7178			
O'	THEF	R DOCUMENTS (Incl	uding Author, Title, Date	, Pertinent Pages, Etc.)		
CS	75	Ziegler, S.I., et al., "Effects of scintillation light collection on the time resolution of a time-of-flight detector for annihilation quanta," <i>IEEE Transactions on Nuclear Science</i> , 1990, 37(2), 574-579				
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EXAMINER	7		DATE CO	NSIDERED /6/13/05		
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Form PTO-1449 Modified	Docket No. UPN-4296/P2957  Application No. 10/706,799  Applicant Joel S. Karp, et al.		
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U.S. Department of Commerce Patent and Trademark Office	Filing Date November 12, 2003	Group 3736 287-8	
	Confirmation No. 7178		
OTHER DOCUMENTS (Incl	luding Author, Title, Date	e, Pertinent Pages, Etc.)	
1 Copy of the PCT Inter (PCT/US03/35922)	rnational Search Report dat	ed April 28, 2004	
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Form PTO-1449 Modified  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office				Docket No. UPN-4296/P2957	Applica 10/706,	ation No. ,799	
				Applicant Joel S. Karp, et al.			
				Filing Date November 12, 2003	Group 3736	2878	,
				Confirmation No. 7178			
		U. S	S. PATEN	r documents			
Examiner Initial		Document No.	Date	Name		Class	Subclass
Ce	2		05/14/91	Moses		250	361
()	3	6,285,028 B1	09/04/01	Yamakawa		250	370.09
03	4	2004/0017224 A1	01/29/04	Tumer, et al.		327	51
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